

REMARKS

Claims 28-44, 50 and 51 stand rejected under 35 U.S.C. §102(b) as being anticipated by Yoshida et al. (Korean Patent No. 2001-0015316). Applicants respectfully traverse the rejection because Yoshida fails to disclose the mixing ratio by weight between the liquid crystal material and the alignment assisting material to be in a range from 99:1 to 90:10. Applicants further traverse the rejection because Yoshida fails to disclose or suggest a liquid crystal material comprising liquid crystals in an alignment assisting material, as recited in independent claims 28 and 41.

Independent claims 28 and 41 call for a liquid crystal material that comprises liquid crystals in an alignment assisting material for vertically aligning liquid crystal molecules. The claims further call for alignment assisting material to comprise a monofunctional monomer and a multifunctional monomer of crylate in a mixing ratio by weight in a range from 15:1 to 5:1, and a polymerization initiator which is in a mixing ratio of 2% or less by weight to that the total amount of the monofunctional monomer and multifunctional monomer. Additionally, the mixing ration by weight between the liquid crystal material and alignment assisting material is in the range from 99:1 to 90:10. Yoshida fails to disclose or suggest these features.

Yoshida discloses at col. 7, lines 44-47 that a polymer x1 and x2 are mixed or copolymerized at a 2:8 ratio to form the alignment films 16a, 16b on the surfaces of the transparent glass substrates 11 and 12. Yoshida further discloses at col. 8, lines 6-8 that the alignment apparatus having the above structure irradiates ultraviolet light from an

angle of 45° at an incline with respect to the surface of the alignment film 16a (16b). Furthermore, Yoshida discloses at col. 8, lines 29-31 that the liquid crystal is injected between the pair of glass substrates 11 and 12 to form the liquid crystal layer 13, and then the injection port is sealed. Accordingly, Yoshida teaches that the alignment film has already been formed on the substrate before injecting the liquid crystal between the substrates. However, Yoshida fails to disclose or suggest the liquid crystal material comprising an alignment assisting material.

More specifically, Yoshida fails to disclose or suggest sealing a liquid crystal material comprising an alignment assisting material for aligning liquid crystal molecules between the inner-surfaces of the substrates on which the alignment films for aligning liquid crystal molecules have already been formed. For this reason, Applicants respectfully submit that Yoshida fails to disclose or suggest the alignment assisting material recited in independent claims 28 and 41.

Additionally, Yoshida fails to disclose or suggest that the alignment assisting material comprises a monofunctional monomer and a multifunctional monomer of acrylic resin, acrylate or methacrylate in a mixing ratio by weight in the range from 15:1 to 5:1, and a polymerization initiator which is in a mixing ratio of 2% or less by weight to the total amount of the monofunctional monomer and the multifunctional monomer.

Yoshida also fails to disclose or suggest the mixing ratio being in the range cited by Applicants. More specifically, Yoshida fails to disclose or suggest a mixing

ratio by weight between the liquid crystal material and the alignment assisting material in the range from 99:1 to 90:10. For all these reasons, the rejection is improper and should be withdrawn, which is respectfully requested.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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